UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/515,909	02/29/2000	Takashi Monzawa	FUJR 17.002	1277

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EXAMINER
VAUGHAN, MICHAEL R

ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/515,909	MONZAWA ET AL.
	Examiner	Art Unit
	Michael R Vaughan	2131

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 February 2000*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 February 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3-4* .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

DETAILED ACTION

Claims 1-29 have been examined and are pending.

Specification

Applicant is required to update the status (pending, allowed, etc.) of all parent priority applications in the first line of the specification. The status of all citations of US filed applications in the specification should also be updated where appropriate.

Information Disclosure Statement

An initialed and dated copy of Applicant's IDS form 1449, Paper No. 4, is attached to the instant Office action.

The information disclosure statement filed October 4, 2000 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC ' 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

>the invention was known or used by others in this country, or patented or
>
>described in a printed publication in this or a foreign country, before the
>
>invention thereof by the applicant for a patent.
>
>the invention was patented or described in a printed publication in this or a
>
>foreign country or in public use or on sale in this country, more than one year
>
>prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by

another filed in the United States before the invention thereof by the applicant for

patent, or on an international application by another who has fulfilled the

requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the

invention thereof by the applicant for patent.

Claims 1-3, 5-12, and 14-29 are rejected under 35 U.S.C. 102(e) as being

anticipated by Khan et al (USP 6,029,046).

As per claim 1, Khan et al teach an optical network unit coupled to an optical

access network system, which receives a data stream and dechurns information

contained in the received data stream by using a churning key (column 6, line 38),

comprising:

(a)   churning parameter memory means for storing churning parameters

that indicate which logical connections are churned or not churned (column 5,

lines 47-48), comprising:

(al) first memory means, initially assigned an active role, for storing the

churning parameters that are currently used (column 2, lines 55-56), and

(a2) second memory means, initially assigned a backup role, far storing

newly updated churning parameters (column 2, lines 59-60),

wherein said first memory means and second memory means are

controlled so that the active and backup roles will alternate with each other at every

churning key updating time point at which an updated churning key becomes effective

(column 8, lines 51-61); and

(b)   data dechurning means for receiving a data stream consisting of a plurality

of frames and dechurning churned information contained in the data stream according

to the churning parameters stored in said first or second memory means currently

playing the active role, the churning parameters being activated at the beginning of a

frame subsequent to the churning key updating time point (column 12, lines 1-11).

As per claim 2, Khan et al teach said first memory means is assigned the backup

role, and said second memory means is assigned the active role as a result of said

alternating of the active and backup roles at the churning key updating time point

(column 2, lines 55-60); and

said churning parameter memory means performs a copying process to copy the

stored churning parameters from said second memory means to said first memory

means (column 2, line 58).

As per claim 3, Khan et al teach churning parameter memory means saves a

new churning parameter into said first memory means after the copying process is

finished, when the new churning parameter is received during the copying process

(column 2, line 58).

As per claim 5, Khan et al teach verifies whether the received churning

parameter has correctly been written to said first or second memory means, and returns

an acknowledge message only when the received churning parameter is successfully

verified (column 12, 24-30).

As per claim 6, Khan et al teach a non-volatile memory; and external memory

control means for storing the churning parameters into said non-volatile memory

(column 2, line 59).

As per claim 7, Khan et al teach wherein said external memory control means compares each received churning parameter with the corresponding churning parameter read out of said second memory means currently playing the backup role, so as to write only changed churning parameters to said non-volatile memory (column 12, lines 8-11).

As per claim 8, Khan et al teach said external memory control means comprises a local memory to store the churning parameters temporarily; and upon power-down, said external memory control means transfers at a time the churning parameters from said local memory to said non-volatile memory (column 8, line 62—column 9, line 7).

As per claim 9, Khan et al teach external memory control means comprises a local memory to store the churning parameters temporarily (column 12, lines 8-11); and upon power-down, said external memory control means transfers only changed churning parameters from said local memory to said non-volatile memory (column 8, line 62—column 9, line 7).

As per claim 10, Khan et al teach churning parameter memory means receives the churning parameters from said non-volatile memory only when the optical network unit is in a standby state after power-up (column 8, line 59-61).

As per claim 11, Khan et al teach churning parameter memory means activates either of the churning parameters received from said non-volatile memory and a set of newly supplied churning parameters after power-up (column 10, lines 34-40).

As per claim 12, Khan et al teach dechurning mask means for disabling the dechurning function of said data dechurning means during a period from a restarting time point to the churning key updating time point, said restarting time point being a time point when the optical network unit re-enters an operating state from another state after having left the operating state (column 11, lines 15-40).

As per claim 14, Khan et al teach optical line terminal coupled to an optical access network system, which transmits a data stream containing information that is churned by using a churning key, comprising:

flag control means for controlling flags when sending the data stream to a receiving end; and

churning parameter transmission control means for controlling transmission of churning parameters to the receiving end, based on the status of the flags, the churning parameters indicating which logical connections are churned or not churned (column 13, lines 24-42).

As per claim 15, Khan et al teach the flag control means clears an initial parameter delivered flag when the receiving end is in a standby state, and sets the

initial parameter delivered flag at the end of an initial parameter delivery process that delivers an entire set of the current churning parameters to the receiving end (column 21, lines 4-6).

As per claim 16, Khan et al teach the flags provided by said flag controlling means include an initial parameter delivery in progress flag that indicates that an initial parameter delivery process is in progress to deliver an entire set of the current churning parameters to the receiving end (column 21, lines 1-4).

As per claim 17, Khan et al teach said flag control means sets a parameter update failure flag when an update of the churning parameters being stored in the receiving end has failed (column 21, lines 4-7).

As per claim 18, Khan et al teach flag control means sets a parameter update unfinished flag when the receiving end has left an operating state (column 21, lines 27-30).

As per claims 19 and 20, Khan et al teach flag control meanssets a churning key updating flag when the optical line terminal is updating the churning key (column 21, lines 4-6).

As per claims 21 and 22, Khan et al teach flag control means sets the

parameter update request flag to initiate an update of one logical connection for one receiving end (column 21, lines 4-7).

As per claim 23, Khan et al teach churning parameter overwriting means for performing a churning parameter overwriting process that resends the churning parameters to the receiving end (column 13, lines 24-30).

As per claim 24, Khan et al teach churning parameter overwriting means suspends the churning parameter overwriting process when transmitting another message having a higher priority (column 12, lines 1-11).

As per claim 25, Khan et al teach churning parameter overwriting means suspends the overwriting process while the churning parameters are being updated (column 12, lines 1-10).

As per claim 26, Khan et al teach churning parameter overwriting means comprises a timer that operates at predetermined intervals; and

said churning parameter overwriting means is regularly activated by said timer (column 11, lines 52-65).

As per claim 27, Khan et al teach the interval of said timer is given by an external source (column 11, line 54).

As per claim 28, Khan et al teach said churning parameter transmission control

means transmits a churning parameter message multiple times to send one of the

churning parameters to the receiving end (column 12, lines 1-11);

when sending the first instance of the churning parameter message, said

churning parameter transmission control means performs arbitration between the

churning parameter message and other messages; and

after the arbitration is finished, said churning parameter transmission control

means automatically transmits the multiple instances of the churning parameter

message at predetermined intervals (column 11, lines 52-63).

Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Wasilewski

et al (USP 6,434,714).

As per claim 13, Khan et al teach an optical network unit coupled to an

optical access network system, which receives a data stream and dechurns information

contained in the received data stream by using a churning key (column 7, lines 42-45),

comprising:

churning parameter memory means for storing churning parameters that indicate

which logical connections are churned or not churned (column 20, lines 46-50); and

data dechurning means for receiving the data stream (column 8, lines 55-60) consisting

of a plurality of frames (column 16, line 60) and dechurning the information contained in

the data stream according to the churning parameter stored in said churning parameter

memory means (column 8, lines 9-11), the churning parameters being activated at the

beginning of each frame, whereby an update having been made thereto in a specific

frame becomes effective in the next frame.

Claim Rejections - 35 USC ' 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed
>
> or described as set forth in section 102 of this title, if the differences between
>
> the subject matter sought to be patented and the prior art are such that the
>
> subject matter as a whole would have been obvious at the time the invention
>
> was made to a person having ordinary skill in the art to which said subject
>
> matter pertains. Patentability shall not be negatived by the manner in which
>
> the invention was made.

Claim 4, are rejected under 35 U.S.C. 103(a) as being unpatentable over Khan et

al in view of Wasilewski et al (USP 6,434,714).

As per claim 4, Khan et al fails to teach churning parameter memory means

comprises said first and second memory means each having two ports for reading out

data therefrom. Wasilewski et al teach churning parameter memory means comprises said first and second memory means each having two ports for reading out data therefrom (Fig. 2c, reference 151).

In view of this, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teaching of Wasilewski et al within the system of Khan et al because having two read ports on the memory would allow parallel processing of data which leads to higher computational efficiency.
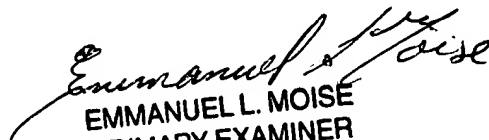
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R Vaughan whose telephone number is 703-305-0354. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

EMMANUEL L. MOISE
PRIMARY EXAMINER

MV
Michael R Vaughan
Examiner
Art Unit 2131